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D/SSC/SM575/867/7/22

February 1989

FEASIBILITY STUDY

UNDERWATER STORAGE OF DECOMMISSIONED NUCLEAR SUBMARINES

References:

- A. D/DMS(N)/1/1/5² dated 8.2.89
B. DREADNOUGHT ²NARR dated 19.8.88

GENERAL

The de-fuelled and de-stored nuclear submarine will be towed from Rosyth to a selected site in the Hebrides area and ^{lowered}sunk to the bottom. After a period that will be not less than 20 years and not more than 100 years, it will be raised to the surface and transported to a facility where the reactor plant will be cut up for disposal to the NIREX ^{Waste Centre} facility and the remainder of the vessel prepared for disposal as scrap. The storage depth will be nominally 200 metres.

PREPARATION OF REACTOR PLANT

A concrete fill of the RC is not practicable as there is ^{no} viable method of breaking up such a monolith, other than manual methods which would be extremely expensive and a high dose burden. There is a strong case for a fresh water fill of the RC, which would facilitate preservation of containment and reduce corrosion of primary systems. As bulkhead strength is marginal for the hydrostatic pressure involved, it would be necessary to provide compensation

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1. from
where?
diesel
oil tank?